

CLAIMS

1. A dynamic display system that includes a case (1, 1', 1", 1'') provided with at least one front opening (10) and at least one support means (16) in the case (1, 1', 1", 1'') for supporting at least one removable poster frame (3), a distributed lighting system (4) in the case (1, 1', 1", 1'') to provide backlighting for-said posters (3), characterized in that at least one removable, digitally controlled, display device is fitted instead of at least one poster frame (3) so as to cover said front opening(s) (10), wherein said removable device (2) includes front part, formed from a frame (20) and a flat viewing screen (200) mounted in the frame (20), and a control and management rear part attached to the back of the front part, an electrical and mechanical interface being provided on the removable device (2) in order to establish, in a detachable manner, both a connection to an electrical power supply located in the case (1, 1', 1", 1'') and securing of the device in a front location (100) of the case (1, 1', 1", 1'').

2. A dynamic display system according to claim 1, wherein said viewing screen (200) is mounted in a frame (20) whose shape and dimensions correspond to an associated poster frame (3), with securing means, attached to the frame (20), being provided to hold the viewing screen (200) in a frontal position.

3. A dynamic display system according to claim 1, in which the removable device (2) is dimensioned to be interchangeable with a poster frame (3) presented through the said front opening (10), with the support means (16) of the poster frame (3) being arranged to be attached to fast securing resources on the removable device (2).

4. A dynamic display system according to claim 1, in which the lighting system (4) includes at least one fluorescent tube, with the rear part of the removable digitally-controlled display device (2) including a protective cover (23) against optical and electromagnetic radiations.

5. A dynamic display system according to claim 1, in which the rear part of the removable device (2) has dimensions that are less than or equal to those of the frame (20) of the front part, with the rear part including electronic management and control components secured by attachment
5 means and distributed over the back of the viewing screen (200) constituting the front part, with all of said electronic components being placed in a flattened volume of suitable shape, delimited by a protective cover (23) whose thickness is between 2 and 10 cm.

6. A dynamic display system according to claims 1, in which the rear
10 part of the screen (200) includes, in particular:

- a module for video control (25) of the flat screen (200),
- graphics card means with or without a sound card,
- a processing unit (26) for the execution of software modules and in particular the management of multimedia functions on the flat screen (200),
- 15 - storage means (27) for storing data representing images and audiovisual/numerical displays.

7. A dynamic display system according to claim 1, in which the removable device (2) includes means for communication and connection (22) to a network, to send and to receive notably, data of the digital audiovisual
20 type, via at least one two-way channel.

8. A dynamic display system according to claim 5, in which the removable digitally-controlled display device includes means for removing air heated by the electronic management and control components and the display components.

25 9. A dynamic display system according to claim 5, in which the rear part includes at least one localized cooling system for removing the heat given off by at least one of the electronic management and control components.

10. A dynamic display system according to claim 8, in which the
30 removable display device (2) includes a ventilation intake (500) equipped

with a filtration system to retain oil vapours, greasy substances and other particles (smoke, etc.).

11. A dynamic display system according to claim 4, in which the frontal housing (100) of the case (1, 1', 1'', 1''') has a volume that is
5 determined to contain the rear part of the removable device (2), the protective cover (23) including a metallic material with reflective properties, and said case including an opening frame (13) with a window that is removable or hinged so that it can be folded back against the front opening (10).
- 10 12. A dynamic display system according to claim 1, in which the removable device (2) includes a reader (29) for digital data media disks.
13. A dynamic display system according to claim 12, in which the reader (29) is arranged to be reached directly via an access door located on the outside of the frontal location.
- 15 14. A dynamic display system according to claim 6, in which the viewing screen (200) of the removable device (2) has dimensions which are designed to be more or less equal to the dimensions of the front opening (10), with matching means being provided in the screen video-control module (25) in order to match the digital data representing the video and/or animation
20 to the format of the viewing screen (200).
15. A dynamic display system according to claims 1, in which the support means (16) for the poster frames (3) consist in retaining profiles placed around the periphery of the front opening (10) and suitable for attaching to complementary profiles located on the periphery of the poster
25 frames (3) and of the removable device (2), respectively.
16. A dynamic display system according to claim 6, in which the removable digitally-controlled display device includes user interface means connected through a physical and/or remote connection to the processing unit (26) so as to provide control of the display on the screen (200), by using
30 programming software stored in the storage means (27).

17. A dynamic display system according to claim 7, in which the removable digitally-controlled display device (2) is remotely controlled by a programming server connected to the network, and having information sources to be remotely transmitted, these information sources including
- 5 digital data said programming server controlling equipment for remote maintenance of the said device (2).
18. A dynamic display system according to claim 1, in which the case (1, 1', 1", 1'') is substantially of trapezoidal shape, with the case including a horizontal top and bottom, the back of the case being substantially vertical,
- 10 the front opening (10) for the removable digitally-controlled display device (2) being inclined at an angle of between 0 and 30 degrees, the maximum thickness of the case remaining under 30 cm and with a minimum thickness of the order of 10 cm, and the lighting system (4) including lighting means distributed over the height of the case.
- 15 19. A dynamic display system according to claim 1, in which air-flow channelling partitions (52) are provided in the rear part, in order to form at least one restricted zone of forced ventilation around electronic components.
- 20 20. A removable digitally-controlled display device (2) that is intended to replace at least one poster frame (3) in a box or case (1, 1', 1", 1'') of the type with a back-lit display and provided with at least one support mean (16) for supporting at least one removable poster frame (3) and at least one front opening (10) with frontal location (100) of specified dimensions, the device (2) being characterized in that it includes an electrical and mechanical interface in order to establish, in a detachable manner, both a connection to
- 25 an electrical power supply located in the case (1, 1', 1", 1'') and securing of the device (2) in the frontal location (100), a front part, formed by a frame (20) and a flat viewing screen (200) mounted in the frame (20), and a control and management rear part attached to the back of the front part.
21. A removable display device (2) according to claim 20, wherein said
- 30 viewing screen (200) is mounted in a frame (20) whose shape and

dimensions correspond to an associated poster frame (3), with securing means attached to the frame (20) being provided to hold the viewing screen (200) in a frontal position.

22. A removable display device (2) according to claim 20, in which the
5 rear part of the removable digitally-controlled display device (2) includes a protective cover (23) against optical and electromagnetic radiations.

23. A removable display device (2) according to claim 20, in which the rear part of the removable device (2) has dimensions that are less than or equal to those of the frame (20) of the front part, with the rear part including
10 electronic management and control components secured by attachment means and distributed over the back of the viewing screen (200) constituting the front part, with all of said electronic components being placed in a flattened volume of suitable design, capped by a protective cover (23) whose thickness is between 2 and 10 cm.

- 15 24. A removable display device (2) according to claim 20, in which the rear part of the screen (200) includes, in particular:

- a video control module (25) for the flat screen (200),
- graphics card means and a sound card,
- 20 a processing unit (26) for the execution of software modules and, in particular, the management of multimedia functions on the flat screen (200),
- storage means (27) for storing data representing images and audiovisual/digital animations.

25. A removable display device (2) according to claim 20, including means for communication and connection (22) to a network for transmission, and reception, of data of the digital audiovisual type, via at least one two-way channel.

26. A removable display device (2) according to claim 20, including a ventilation intake (500) equipped with a filtration system to retain oil vapours, greasy substances and other particles (smoke, etc.).

27. A removable display device (2) according to claim 23, including means for removing the air heated by the electronic management and control components and the display components.
28. A removable display device (2) according to claim 23, of the type
5 without a ventilation opening and including a radial ventilation assembly (520) provided for mixing the air heated by the electronic management and control components and for ensuring the transmission of heat through the protective cover (23), the said cover (23) being metal-based and designed to transmit the heat by convection and radiation.
- 10 29. A removable display device (2) according to claim 20, in which said rear part is equipped with at least one fan (521) positioned tangentially so as to provide an upward air circulation, with at least one ventilation intake (522) being provided at the front of the device (2) below the viewing screen (200), and a discharge outlet (523) at the rear of the device (2).
- 15 30. A removable display device (2) according to claim 24, in which the viewing screen (200) has dimensions that are designed to be more or less equal to the dimensions of the front opening (10), with matching means being provided in the video control module (25) of the screen in order to match the digital data representing video and/or animations to the format of the display screen (200).
- 20 31. A removable display device (2) according to claim 25, including remote maintenance equipment that can be remotely controlled by a programming server connected to the network and having information sources for remote transmission, these information sources including digital data.
- 25 32. A removable display device (2) according to claim 25, in which the removable device (2) includes a disk drive (29) for digital media.
- 30 33. A dynamic display system according to claim 32, in which the disk drive (29) is arranged to be reached directly via an access door located on the outside of the frontal location.